



GENERAL MONITORS
Protection for life.

MODEL 610A

Four-Channel Combustible Gas Monitor



Features

- Four Independent Channels
- Low power consumption
- High visibility LED status indicators
- Variety of relay options
- Adjustment-free calibration
- Low cable costs

Benefits

- Maximum reliability
- Low operating costs
- Provides visual indication of fault and alarm status at the detector location
- Provides choice to meet specific customer requirements
- Lower calibration costs
- Lower installation costs

Description

The Model 610A Controller is a four-channel system designed to continuously monitor for potential explosive concentrations of most combustible gases/vapors. The system operates in the range of 0-100% LEL (Lower Explosive Limit) and is calibrated for a particular gas or vapor.

The system consists of four remote sensing assemblies and a solid-state controller. The controller consists of four independent channels, each having its own control circuitry. The sensors are monitored independently (i.e. they are not scanned, nor are the signals summed).

The 610A features a digital display of gas concentrations in % LEL (0-99%) for each channel. Calibration of each channel is done independently with alarm relays disabled while in this mode. Normally, only a periodic calibration check is needed to assure dependable performance.

The 610A has a variety of relay options, such as normally energized or de-energized high and low alarms and latching or non-latching high and low alarms. The malfunction relay circuitry is normally energized. These relays may be discrete for each channel or common to all channels. Also included as an option is independent low and high alarm settings for each channel.

Applications

- Fuel Loading Facilities
- Compressor Stations
- LNG Processing and Storage
- Oil Well Logging
- Sewage Plants
- Gas Turbine Enclosures
- Drilling and Production Platforms
- Solvent Vapors



MODEL 610A

System Specifications

Digital Readout: 0-99% LEL

Accuracy: ±3% LEL ≤ 50% LEL gas
5% LEL > 50% LEL gas

Electrical Classification: General purpose for mounting in non-hazardous areas, indoors.

Warranty: Two years

Approvals: CSA & FM

Environmental Specifications

Temperature Range: 32°F to 140°F (0°C to 60°C)

Storage Temperature: -4°F to 149°F (-20°C to 65°C)

Humidity: 15-95%, non-condensing

Mechanical Specifications

Mounting: Panel or wall

Dimensions: 4.0" W x 6.9" H x 11.5" D
(102mmW x 175mmH x 292mmD)

Weight: 6.2 lbs. (2.86 kg)

Electrical Specifications

Power: 105-130 VAC (205-255 VAC optional), 50-60 Hz, 22-30 VDC, 9 watts nominal per channel (117 VAC)

Output: Analog 4-20mA (300 ohm load max.) Accuracy ±5%, 1.5-20mA

Alarm Circuits: 4A/117 VAC, resistive

LED Status Indicators: AO - Analog output malfunction
SE - Sensor malfunction
HI - High line voltage
LO - Low line voltage

Standard Configuration: 610A-1-1-1-01-1-2-4 (110 VAC / 24 VDC, common relays/alarms, latch alarm, non-latch warn, de-energized, standard sensor, FM, Zone Controller Off, 4-Channels Active)

Sensor Elements

General Monitors' sensors are designed for reliable performance and long life. Each sensor must undergo extensive burn-in and rigid quality control procedures before shipment.

The sensors consist of two catalytic bead elements in a balanced Wheatstone bridge circuit. These low temperature catalytic bead sensing elements require minimal sensor excitation current, greatly increasing sensor life.

Sensor Specifications

Type: Continuous diffusion, low temperature catalytic bead. Standard Industrial Hydrocarbon Sensor. High Temperature Standard Industrial Hydrocarbon Sensor.

Temperature Range: -65°F to +200°F (-55°C to +93°C)
High Temperature Sensor to 400°F (200°C)

Response Time: T₅₀: typical 6-seconds

Zero Drift: Less than 5% per year

Life: 3 to 5 years, normal service

Electrical Classification: Class I, Division 1 and 2, Groups B, C and D

Cable Length: Three conductor cable. Maximum length of cable between controller and sensor assembly with loop resistance of 20 ohms NOTE: Shielded cable is recommended

Wire Size AWG	Length	
	(Meters)	(Feet)
14	2,320	7,600
16	1,460	4,800
18	910	3,000
20	580	1,900

Warranty: Two years

Approvals: CSA and/or FM

Specifications subject to change without notice.

Represented by:

General Monitors Worldwide



www.generalmonitors.com

Lake Forest, CA

26776 Simpatica Circle
Lake Forest, California, 92630
Tel: +1-949-581-4464
Fax: +1-949-581-1151
email: info@generalmonitors.com

Houston, TX

9776 Whithorn Drive
Houston, Texas, 77095
Tel: +1-281-855-6000
Fax: +1-281-855-3290
email: gmhou@generalmonitors.com

Ireland

Ballybrit Business Park
Galway
Republic of Ireland
Tel: +353-91-751175
Fax: +353-91-751317
email: info@gmil.ie

Singapore

No. 2 Kallang Pudding Road
#09-16 Mactech Building
Singapore 349307
Tel: +65-6748-3488
Fax: +65-6748-1911
email: genmon@gmpacifica.com.sg

United Arab Emirates

P.O. Box 61209
Jebel Ali
Dubai
United Arab Emirates
Tel: +971-4-8815751
Fax: +971-4-8817927
email: gmme@emirates.net.ae

United Kingdom

Heather Close
Lyme Green Business Park
Macclesfield, Cheshire
United Kingdom, SK11 0LR
Tel: +44-1625-619583
Fax: +44-1625-619098
email: info@generalmonitors.co.uk